East Texas Plant Materials Center

Progress Report of Activities for 2001

February 2002

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Who We Are

The East Texas Plant Materials Center (ETPMC) is part of the United States Department of Agriculture, Natural Resources Conservation Service (NRCS). The Center is a joint venture between Soil and Water Conservation Districts in east Texas and northwestern Louisiana, NRCS, Stephen F. Austin State University, and United States Forest Service. The Center is located on the Stephen F. Austin Experimental Forest approximately ten miles southwest of Nacogdoches, Texas. The Plant Materials Center serves 48.2 million acres in east Texas and northwestern Louisiana. The topography is diverse ranging from level floodplains to strongly sloping forestlands and prairies.

What We Do

The mission of the East Texas Plant Materials Center is to develop and transfer plant knowledge to NRCS field offices and land managers in both private and public sectors. The Center emphasizes using native plants as a way to address conservation issues and protect native ecosystems. Adapted plants are evaluated, tested, and released to commercial seed growers. The Center promotes the use of new plants through field plantings and demonstration projects.

Major objectives of the Center are:

- Reduce soil erosion and improve water quality
- Improve forage quality for domestic livestock and wildife food and habitat
- Revegetation and restoration of disturbed sites

<u>Following are some highlights for 2001</u>

Warm Season Grasses for Forage and Prairie Restoration

Evaluation of Big bluestem and Sand bluestem Cultivars and Experimental Lines – A Cooperative Study with the Agricultural Research Service – Southern Plains Research Station - Drs. Tim Springer and Chet Dewald

Big bluestem is a highly palatable livestock forage. Bluestem was one of the four most important grasses of the North American tallgrass prairie.

'Woodward' Sand bluestem, which was released in 1955, no longer has breeder or certified class seed available. The objective of this study is to compare 'Kaw' Big bluestem, 'Woodward' Sand bluestem, seed sold as 'Woodward' Sand Bluestem, and experimental lines of Big and Sand bluestem for forage and seed characteristics. This is a regional study with four other Plant Materials Centers (Elsberry, MO, Manhattan, KS, Knox City, TX, and Coffeeville, MS) participating in the evaluation.

Agreement with the Native Prairies Association of Texas

The Plant Materials Center is working with the Native Prairies Association of Texas to grow native grass seed collected near Houston, Texas. This study is an effort to preserve and increase native germplasm for restoration or revegetation of natural areas. Currently, local ecotypes are not commercially available. Seed will be increased and provided to local growers for field size production.

Seed Increase of Eastern gamagrass (Tripsacum dactyloides)

Eastern gamagrass is a native warm season perennial grass used for livestock forage. This grass grows from 3 to 8 feet tall. Within the United States, Eastern gamagrass grows from New York state to the Midwest, southeast, and Great Plains. Eastern gamagrass grows on moist well drained soils or sandy loams. However, it does not grow well in deep sands.

Foundation seed of 'Medina' and 'Jackson' eastern gamagrass is being grown at the East Texas Plant Materials Center.

Wildife Food and Habitat

Seed Increase of Florida paspalum (Paspalum floridanum)

Florida paspalum is a perennial native warm season grass. This grass grows on moist-well drained soils but will tolerate dry, sandy sites. It ranges from Texas to Florida, north to Missouri and Maryland. Young growth is palatable and nutritious to livestock. The large seeds are eaten by quail, doves, and turkey.

A seed production block of accession #9043874, from Harrison County, Texas, has been established to produce foundation seed.

Advanced Evaluation of Beaked panicum (Panicum anceps)

Beaked panicum is a native warm season perennial grass which grows 2-4' in height. Beaked panicum ranges from New Jersey to southern Illinois west to Kansas and south to Florida and Texas. This grass grows on poorly drained areas, open sites, or moderately shaded pine canopies. Beaked panicum can be used to revegetate cut over timber ground, surface mined lands, or as a source of wildlife food and cover.

Accessions chosen from the initial evaluation block were transplanted to the advanced evaluation block. The six accessions are:

#9067094	Walker County, Texas
#28510	Mississippi Plant Materials Center
#9067121	Rapides Parish, Louisiana
#9067102	Harrison County, Texas
#9067079	Smith County, Texas
#9067071	Grimes County, Texas

Revegetation of Disturbed Areas

Seed Increase of Virginia wildrye, (Elymus virginicus)

Virginia wildrye is a native cool season perennial which grows two to three feet tall. Virginia wildrye grows throughout the southern United States along stream borders and woods. Virginia wildrye is known as a “decreaser” which decreases in plant composition on overgrazed rangeland. Plants do not tolerate burning very well. Seed increase of PI 436971 from Anderson County, Texas is being done for field plantings and further testing.

Seed Increase of Deertongue, (Dicanthelium clandestinum)

Deertongue has the ability to grow on low fertility, acid soils. This plant is one of the first to inhabit a disturbed site which makes it a useful plant for revegetation.

There is one commercial variety, “Tioga” on the commercial market. However, “Tioga” is adapted to the northeastern United States and does not perform well in east Texas.

Accession #9067334 was collected from Camp County, Texas. This initial seed increase is to establish a larger seed production block.

Seed Increase of Herbaceous mimosa, (Mimosa strigillosa)

Herbaceous mimosa is a warm season, deciduous perennial legume found throughout the southeastern United States. The plant grows to a height of six inches and spreads by producing runners which root at the nodes. Pinkish round blooms are produced during the growing season. Once established, the plant is able to tolerate periods of drought. This plant is useful for revegetation of mining land and roadsides.

Foundation seed of Accession PI 548994 from Houston County, Texas is being produced for commercial growers and for use in Texas Department of Transportation vegetation trials.

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